Gauri Toshniwal

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EDUCATION

National Institute of Technology, Tiruchirappalli — Tamil Nadu, India
*Masters of Technology - Data Analytics (CGPA: **9.49**/10) [Rank 1]* — 08/2023 - 06/2025
Coursework: Deep Learning, **NLP**, **Machine Learning**, Federated Learning, Mathematics (Linear Algebra, Probability)

Government College of Engineering, Nagpur — Maharashtra, India
*Bachelor of Engineering - Computer Science and Engineering (CGPA: **9.42**/10)* — 06/2021
Coursework: Operating Systems, Data Structures & Algorithms, Artificial Intelligence, Databases, Discrete Mathematics, Compilers

RESEARCH

- **Step-by-Step or All-at-Once? Sequential Fine-Tuning for Solving Math Word Problems** — 07/2024 - Current
  Explores the impact of difficulty-based ordering, sequential fine-tuning, and progressive parameter shrinking in LLMs. (Master's Thesis) (Paper Submitted and In Review)
- **Contextual QA for Financial Causality Detection Combining Extractive and Generative Models** — 12/2024
  Secured **3rd Rank** in the English Subtask at FNP Workshop FinCausal 2025, **COLING**, with a SAS score of 96.74% and EM score of 70.14% using a hybrid RoBERTa-base and Gemma2-9B model. (**Paper**)
- **DECOR 2022@ICDE, 38th IEEE International Conference on Data Engineering** **Paper** — 05/2022
  Won ***Best Student Paper Award*** for "Object Detection in Indian Food Platters using Transfer Learning with YOLOv4"

WORK EXPERIENCE

Astreya — Remote, India
AI/ML Intern — 01/2025 - Current
Ticket Volume Forecasting on sparse time series data using the **Croston Method** in **BigQuery ML** for improved resource planning.

Findability Sciences — Remote, India
Data Scientist (Onsite - Hindustan Times Digital) — 05/2021 - 08/2023

- **Demographics (Gender, Age, Interest) Prediction:**
  Built user-level classifiers for gender, age, and interest prediction using grammatical and entity-based features from news headlines, achieving an F1 score of 0.65 for **2M** users daily. Eliminated reliance on third-party data, saving **₹500,000/month**. Migrated feature engineering and model inference pipelines to PySpark for scalability.
- **Subscription Churn Prediction and Retention Feed:**
  Developed XGBoost models (d-60, d-30, d-15) to track churn probability shifts and used **SHAP** for interpretability. Refactored backend logic and exposed model predictions via a new API endpoint in the Flask server, powering a personalized **retention feed** that improved user engagement.

PROJECTS

- **Closed Domain Event Extraction on RAMS Dataset** **Github** — 05/2024
  Transformed event trigger identification, classification and argument detection, into token classification problems using BIO tagging, then applied BERT-based models for token classification.
- **Comprehensive Solution for Indian Sign Language Recognition and Translation:** **Github** — 06/2021
  Developed an ISL recognition and translation system, creating video and hand landmark datasets, and implementing an English-to-ISL text module using PoS tagging and rule based rearranging. Utilized Inception v3 and LSTM for converting ISL gestures to English text, and Mediapipe for real-time ISL detection and classification.

ACADEMIC ACHIEVEMENTS

- **Awarded Reliance Foundation Postgraduate Scholarship for the year 2023-24** — 06/2024
  Received by top 100 students nationwide for exceptional academic achievement and potential in technology and engineering
- **ACM Summer School on Responsible and Safe AI** **Certificate** — 06/2024
  Selected and Attended summer school hosted by IIT Madras
- **AI Safety Fundamentals - Bluedot Impact** **Certificate** — 03/2024 - 06/2024
  Selected for a 12-week online course, covering a range of technical AI alignment research agendas

SKILLS

Languages and Frameworks: Python, C++, C; Pandas, Scikit-learn, PyTorch, Numpy, Flask, Pyspark
Tools and Platforms: Git, HuggingFace, SQL, MongoDB, Redis, Looker Studio, BigQueryML
Areas of Interest: NLP, Deep Learning, AI Safety